Vol. 15(10), pp. 274-282, October 2021
DOI: 10.5897/AJBM2021.9223
Article Number: 1E5947367874
ISSN: 1993-8233

http://www.academicjournals.org/AJBM

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African Journal of Business Management

Review

A review of knowledge management and its application in the contemporary business environment

Japhet Imhanzenobe*, Olaoluwa Adejumo and Olapeju Ikpesu

School of Management and Social Sciences, Pan-Atlantic University, Lagos, Nigeria.

Received 15 March, 2021; Accepted 22 September, 2021

The quest for a better way of enhancing firm performance has led to the discovery of knowledge as a unique and firm-specific resource for achieving competitive advantage. Knowledge management has gained the attention of practitioners and scholars in recent times. Knowledge management involves obtaining the right set of information and making them available to the right people, at the right time. When an adequate knowledge management system is in place, employees can create, share and re-use knowledge. Existing literature shows that knowledge management is still evolving and factors like intellectual capital, innovation and knowledge application play a significant mediating role in its effect on firm performance. Also, knowledge management processes ought to be followed by effective knowledge management implementation strategies to avoid knowledge proliferation and structuration. Modern businesses are gradually evolving from document-based knowledge management systems towards people-based knowledge management systems as a result of higher capacity for improvement and alignment of knowledge management strategies. Modern businesses also try to foster the effectiveness of their knowledge management process through gamification. Several challenges and limitations to knowledge management like organizational culture, lack of knowledge sharing incentive, cultural differences, lack of proper information structures and change management issues were also identified.

Key words: Knowledge management, tacit knowledge, implied knowledge, knowledge management theory, knowledge management system, knowledge sharing.

INTRODUCTION

In past years, organizations improve their effectiveness and efficiency by eliminating redundancy and minimizing manual labor through the introduction of automation or machines, however, the results of this process did not yield the expected outcome, especially in the new age of knowledge workers. Hence, renewed efforts have been channeled into seeking appropriate ways to manage the intangible assets (especially Knowledge) that diffuses through the organization. The concept of knowledge management became popular in the late 1950s, although it has been around for several decades (Dalkir, 2005). Knowledge management covers almost every key aspect of a firm's operations. Past studies have shown that for an organization to be successful, the organization must have systematic knowledge management practices in place (Holm, 2001; Dalkir, 2005; Ganesh et al.,

*Corresponding author. E-mail: jimhanzenobe@pau.edu.ng,

2014). Knowledge management refers to a systematic and deliberate approach of ensuring that organizations fully utilize their knowledge base, innovation, skills, competencies, and experience to create an effective and efficient organization. The concept of knowledge management has been closely linked with the Resource-Base View (RBV) theory with the rationale that knowledge is one of those unique and inimitable resources that can help an organization in achieving competitive advantage. This gave rise to the knowledge-Based theory of the firm (also referred to as Knowledge-Based View theory) as an extension of the Resource-Based View theory (Demsetz, 1991; Grant, 1996). The Knowledge-Based View theory considers firm-specific knowledge to be the most important strategic resource available to firms because of their uniqueness and inimitability, and thus recommends their significance in achieving competitive advantage.

The central aim of knowledge management include reducing the loss of firm's memory via retirement and attrition, ensuring a smooth transition from those retiring to those succeeding them, identifying key result areas, and ensuring that firms' operations are properly understood, building a tool kit approach that can be employed within groups, individual and entire organizations to prevent loss of intellectual capital (Wiig, 1997). This study is aimed at reviewing the different knowledge management definitions, concepts and application suggested by researchers as well as practitioners. To achieve this, we reviewed existing literature on knowledge management, its linkage to the framework of management theories, its application in contemporary businesses as well as some challenges in its implementation. When these definitions, concepts and application are part of the body of knowledge, they become more accessible to academics conducting research, to organizations considering knowledge management, and to other interested parties.

KNOWLEDGE MANAGEMENT

Girard and Girard (2015) did a review study on the different definitions of knowledge management. They emphasized that knowledge management as a concept is not limited to any particular discipline. They reviewed definitions of authors from about 13 different countries and 23 different disciplines (thus, demonstrating the multidisciplinary nature of the concept). From the conducted review, they discovered that the four most common verbs used in describing the knowledge management process were 'use', 'create', 'share', and 'manage'. The most common nouns were 'knowledge', 'process', 'organization', and 'information'. According to Nonaka and Takeuchi (1996) and Pfeffer and Sutton (2000), knowledge management is regarded as a process of adopting a systematic approach to management, structuring, and dissemination of knowledge within the organization to reduce cost, work faster, and re-use best practices. It is the process of creating, capturing, organizing and accessing an organization's intellectual assets in a collaborative and integrated manner (Grey, 1996). Gupta et al. (2000) documented that knowledge management is a firm-wide method that aids corporations to select, accept, organize and disseminate knowledge to enhance the firm's day to day operation. Holm (2001) on the other hand defined knowledge management as looking for ways to obtain the right set of information, to the right people, and at the right time so that employees can create, share and re-use knowledge. According to Bouthillier and Dalkir (2005), knowledge management is a systematic and deliberate coordination of people, technology, process and structure to enhance value via innovation and re-use. He noted that coordination is realized via sharing, creating, and applying knowledge and best practices as well as previously learned lessons.

From the various definitions, it can be inferred that knowledge management involves creating and maintaining a system for the storage, transfer and retrieval of current and previous knowledge and best practices that enables an organization to keep improving in its way of doing things. Hence, knowledge management is regarded as a holistic innovation that cuts across the organization. The basic feature of knowledge management is that it deals with information and knowledge. It also addresses every area of knowledge such as explicit, implicit and tacit knowledge (Polanyi, 1966). Explicit knowledge refers to knowledge that is recorded and fully documented. It is often expressed in formal language (such as a report from an assignment). Implicit knowledge is knowledge that is transferrable but difficult to fully capture in written or verbal form (typical example is the culture of an organization or skills on a job). Tacit knowledge is embedded in the mind/head of the organization. It is not communicated in written form and it is only implied and cannot be easily transferred outside the organization (such as gut feeling, facial recognition etc.). All three categories of knowledge need to be effectively integrated to achieve optimum organizational performance. Ganesh et al. (2014) noted that knowledge management can occur in three levels - individual, group, and the organizational levels, and that knowledge management will be more effective when the stored knowledge is re-used across the firm's business transactions. Knowledge management comprises a range of management practices to create, identify, store, diffuse, replicate and apply knowledge within organizations (Grant, 2016).

Knowledge management process

The effective implementation of the knowledge

management process requires clear and objective capturing of knowledge and facilitating the dissemination of such knowledge throughout the organization. This process is often referred to a knowledge mapping. The process of mapping ensures that the appropriate kind of knowledge is available to people within the organization that would require such knowledge in the discharge of their duties. In practice, organizations adopt the value chain model of knowledge management. According to Lloyd (1996), this model begins with ideas, technical know-how and other intangible assets and is later transformed into measurable intellectual assets through patents. Nonaka and Takeuchi (1996) identified four knowledge management stages that occur in the creation of intellectual capital. These are the socialization, capturing, dissemination and internalization stages (Figure 1). Socialization refers to the transfer or diffusion of knowledge that takes place through interaction with one another. Such interactions take place through interpersonal encounters (such as seminars, workshops, practice, lunch breaks, etc.). Capturing refers to the process of documenting and storing the knowledge gained at the socialization stage (often referred to as tacit knowledge) in an explicit form through organizations approved channels such as written reports, information systems and other means of information storage. At the capturing stage, tacit and implicit knowledge are often converted to explicit knowledge. Dissemination involves the distribution and accessibility of the captured knowledge to members of the organizations as well as updating employees of a discovered way(s) through which certain task(s) can be done more efficiently. Internalization refers to the process through which organizations implement and institute new knowledge as a requirement and best practice that employees should adopt in performing their duties.

Theoretical development of knowledge management

Knowledge management has been a key aspect of management theory and practice. The origin of knowledge management can be traced to the classical management theories. The scientific management theory of Taylor (1911) was concerned with the application of organizational knowledge and experience to the operations of workers in order to improve labor productivity through optimization of worker-to-task mix (Grant, 2016). As the principles and practices of management developed, some neo-classical theories evolved. The management information systems branch of the management science theory was focused on the management of knowledge and information to meet several decision-making needs across the organization (Imhanzenobe, 2021; Jones and George, 2016). The more recent Resource-Based View theory attributes the ability of firms to attain and sustain competitive advantage to the unique and inimitable resources that such firms possess (Barney, 1991; Penrose, 1956, Wernerfelt, 1984). Knowledge has been identified to constitute those unique resources and this has given rise to a theory that attributes the sustainability and competitive advantage of firms to their ability to collect, store, share and manage knowledge as a unique resource (Alavi and Leidner, 2001).

Knowledge-based theory of the firm

In the new economy, knowledge has been frequently identified as the key factor of production, as opposed to other tangible resources (like machinery or money) in the old industrial economy (Torraco, 2000). The Knowledge-Based theory of the firm (also referred to as *Knowledge-Based View Theory*), proposed by Professor Robert Grant, is one of the widely accepted frameworks that explains the role of knowledge in the achievement of organizational goals which often times is to achieve and sustain competitive advantage (Grant, 1996). The Knowledge-Based View Theory is a spin-off from the Resource-Based View Theory (Figure 2). This spin-off was based on the recognition of knowledge as a key unique and inimitable resource that hekps an organization to stand out among its competitors (Demsetz, 1991; Grant, 1996; Hoskisson et al., 1999). In recent times, productivity depends on the ability of employees and managers to create new knowledge, learn, adapt and generate “smart” action (Tzortzaki and Mihiotis, 2014). These new knowledge are collectively referred to as intellectual capital and are seen to belong exclusively to the firm that has generated them. These intellectual capital have been found by several studies to constitute a key ingredient in the overall success of every firm (Clarke et al., 2011; Wang et al., 2014; Inkinen, 2015). Thus, organization ought to strive to provide knowledge management structures in order to aid the acquisition and management of intellectual capital.

Branches of Knowledge management

Knowledge management can be applied in several aspects of an organization. Regardless of which knowledge management practice is employed, knowledge management elements involve processes (structures), people, and technology on knowledge sharing. Accordingly, there are 3 main branches of knowledge management on the basis of the components of the organization’s factors that they address. These branches include organizational knowledge management, ecological knowledge management and techno-centric knowledge management.

Organizational Knowledge Management is the branch of knowledge management that focuses on providing organizational structures and designing appropriate

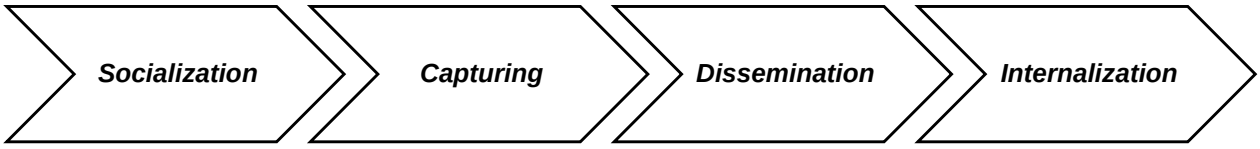

Figure 1. Stages in knowledge management process.

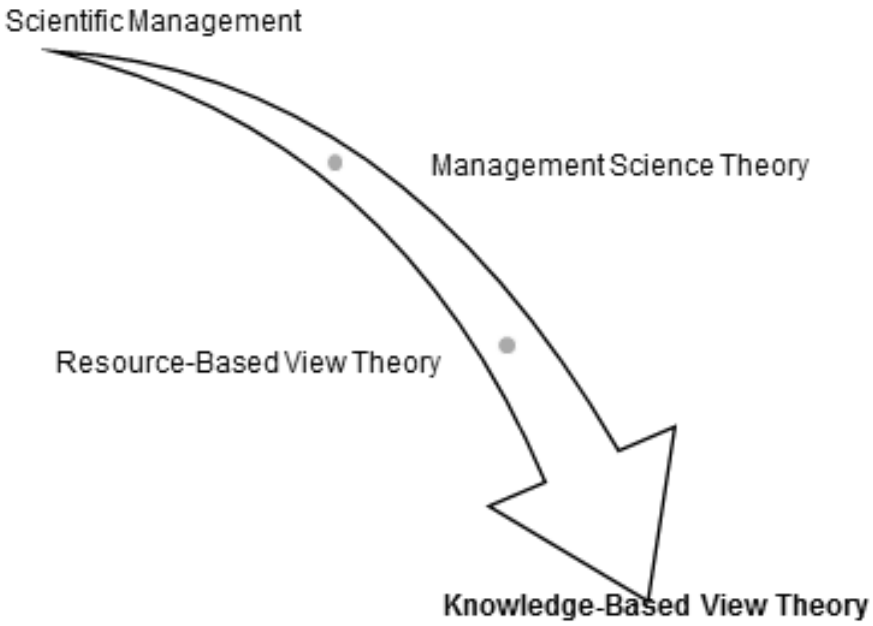

Figure 2. Theoretical development of the Knowledge management theory.

culture and hierarchy in a way that facilitates knowledge storage and sharing (Walczak, 2005). It focuses on creating the right environment for knowledge sharing by putting structures, procedures and promoting cultures that make flow of knowledge easier.

Ecological Knowledge Management is the branch of knowledge management focuses on persons, relationships, groups and other internal and external factors that draw people together with the aim of sharing knowledge (Chen et al., 2010). This aspect tries to manage the human factors in an organization that can influence the desire to discover, share and use knowledge in the operational and strategic processes of the firm. As the information needs of organizations expand there is a need for more complex structures that can store and retrieve information with speed and accuracy. The advent of modern day computer technology has brought about the Techno-centric knowledge management.

Techno-centric Knowledge Management is the branch of knowledge management focuses on the implementation of technology enablers to help facilitate the flow of knowledge and the storage of information. One of the major contributions of information technology to knowledge management is the development of knowledge management system that help organization store large amount of data and information for retrieval and application in solving related problem in future.

Knowledge management systems

Knowledge management systems can be described as the technological part of a knowledge management process or strategy that also comprises person-oriented and organizational instruments targeted at improving the productivity of knowledge (Maier and Hadrich, 2011). It is an information technology (IT) based system designed for the specific support of knowledge related activities (Magnusson et al., 2002). It is a kind of information system that stores and retrieves knowledge to improve understanding, collaboration, and process alignment. The primary goal of knowledge management systems is to store useful knowledge and experience that can be recalled and applied in solving current and future problems, thus resulting in increased organizational

effectiveness (Alavi and Leidner, 2001). Most knowledge management systems make use of database technology that stores data and information across the different departments of an organization in a common pool from which such information can be easily assessed and retrieved when needed. This technology maximizes storage capacity and reduces data duplication and redundancy.

REVIEW OF RECENT EXISTING LITERATURE ON KNOWLEDGE MANAGEMENT

Several studies empirical studies have been done on knowledge management and its impact on organizations. Most of these researches on knowledge management tend to originate more from the US and the UK. But on a continental level, most knowledge management research in recent times, have originated in Europe (Gaviria-Marin et al., 2018). There is little research from emerging and developing markets in this area. Using a survey study and a system dynamics simulation, Chen and Fong (2015) conducted a study to illustrate the movement and transformation from a mechanistic to an organic perception of knowledge management strategy and performance evaluation. The system dynamic simulation was applied to predict the development of knowledge management strategy configurations and the evolution of knowledge management performance over-time. Survey study was also collected on a sample of 143 construction companies, and a confirmatory factor analysis was used to develop a knowledge management performance index for measuring the key elements that make up a firm's knowledge management strategy The results showed that, compared to the mechanistic knowledge management strategy and performance evaluation method, the organic knowledge management strategy and performance evaluation method had a significantly higher capacity to improve the configuration and alignment of knowledge management strategies within a progressively dynamic business environment and had higher capacity for improvement.

Nowacki and Bashnik (2015) studied the scope of innovative knowledge management. The study considered the impact of knowledge management innovations on four aspects of organizational effectiveness, namely; business competitiveness, returns, consumer satisfaction, and satisfaction of the business partners. The results showed that companies' assessment of the impact of knowledge management innovations is correlated with the choice of direction of knowledge management innovations (that is whether organizational, techno-centric or social knowledge management innovation). The authors also collected data on company size (measured by number of employees) and discovered that the ratio of high to low knowledge management innovation increased as company size increases (that is big firms tend to have high level of knowledge management innovation compared to small firms).

Kianto et al. (2016) did a study on the impact of knowledge management on job satisfaction. They argue that the existence of knowledge management systems may be significantly linked with job satisfaction in an individual's working environment. They used structural equation modelling to test the relationship of the five aspects of knowledge management (acquisition, sharing, creation, codification and retention of knowledge) with job satisfaction. Survey data was collected from about 824 respondent belonging to a Finnish municipal organization. They discovered knowledge sharing (especially within the organization) to be a critical knowledge management process that is significantly linked with job satisfaction.

Xue (2017) conducted a study on knowledge management and its significance to organizations. The outcome of the research showed that knowledge management constitutes a major driver for any organization to remain competitive in this contemporary time. The justification for this discovering lies in the fact that competitive advantage involves some level of uniqueness. For a strategy to be competitive, it ought to involve performing different activities or similar activities in a different way from competitors (Zerfass et al., 2018). Knowledge management helps to create ideas and brings about innovations that make organizations unique compare to others.

Shpakova et al. (2017), in their study, suggested gamification as a medium for enhancing knowledge sharing and interaction among workers in contemporary business environment. From review of existing literature on knowledge management and gamification, they discovered that the advantages of gamification goes beyond increased motivation and engagement but can also support flexibility, facilitate transparency (thus improving trust), visualization of skills and competences, and promote a collaborative environment among knowledge workers.

Given the dynamic nature of the business environment, knowledge management has been found to be useful to implement at the strategic management level in order to improve the competitive strength of businesses. Venkitachalam and Willmott (2017) did a study on the benefits and pitfalls of applying knowledge management at the strategic level. They described strategic knowledge management as the process of codifying and personalizing organizational knowledge by strategic managers. Codification refers to the process of capturing and documentation of valuable knowledge and skill and fostering individuals in the organization to refer to such documented knowledge. Personalization, on the other hand, relates to the process of fostering people-to-people form of knowledge sharing. They emphasized that strategic knowledge management, when carried out properly, will bring about harmonization of

conceptualization of strategic knowledge in their organizations. They also identified some challenges that could result from over-emphasis on codification and personalization. Where codification and personalization are given excess priority without proportional emphasis on implementation of the codified knowledge, such organization could suffer from knowledge proliferation problem (a case where stored knowledge multiplies but does not lead to any real innovation). Such firms could also face the problem of losing touch on what kind and how much knowledge to codify (this was referred to as knowledge structuration problem). They advised executives to develop standard criteria for identifying the kinds and volume of organizational knowledge that ought to be captured, stored and retrieved in a structured manner in order to sustain productivity and innovation capacity. This position is similar with that of Raudeliūnienė et al. (2018), who emphasized that the knowledge management process is incomplete without a knowledge implementation strategy and an evaluation of such strategy. They described the knowledge management cycle as consisting of knowledge acquisition, knowledge sharing, knowledge development, knowledge preservation and knowledge application or implementation.

Iqbal et al. (2019) carried out a study on the impact of knowledge management practices on organizational performance in higher education institutions. They examined the mediating role of intellectual capital and innovation in the relationship between knowledge management processes and performance of universities in Pakistan. Data were collected by distributing surveys to about 217 academic and administrative personnel. They used the partial least squares structural equation model. They discovered that the existence of knowledge management processes had positive and significant influence on the organizational performance of the sample universities. They also discovered that intellectual capital and innovation played a significant role in that relationship.

Ode and Ayavoo (2020) did a study on the impact of knowledge management practices on firm innovation. The authors tried to examine the role of knowledge application (implementation) in this relationship. A survey data collected for about 293 service companies in Nigeria. The data was analyzed using structural equation model. The results showed that knowledge generation, storage and application had significant and positive effect on firm innovation. The results also show that knowledge application played a significant mediating role in the relationship between the different knowledge management processes and firm innovation. Thus, they support the opinions of Venkitachalam and Willmott (2017) and Raudeliūnienė et al. (2018) that knowledge generation, diffusion, storage and sharing will only bring about substantial innovation if such stored knowledge is truly applied.

APPLICATION OF KNOWLEDGE MANAGEMENT PRACTICES IN THE CONTEMPORARY BUSINESS ENVIRONMENT

Knowledge and information have been commonly proposed to constitute a key part of the unique resources for every organization and this has necessitated the practice of knowledge management in modern day businesses. Many companies are currently putting together methods that convert tacit and implicit knowledge into explicit knowledge, in forms that can be coded, stored and transmitted, that way the knowledge can be used by others in similar scenarios. Organizations want to act intelligently and knowledge management has presented a platform to achieve this by helping them deliver creative products and services which in time past was not achievable due to limited knowledge (Wiig, 1993). Managers now recognize that this knowledge needs to be diffused and shared within the organization, hence the need to create an enabling environment to achieve knowledge sharing and diffusion.

Several famous companies currently utilize knowledge management systems form which they retrieve information from previous transactions and customers as often as needed. Ford Motors Company (FMC) has been a long time practitioners of knowledge management in their product development process. They started by using web-based knowledge management system to regulate quality standard across all its product lines and this helped them maintain quality and avoid warranty costs. General Electric (GE) is another successful implementer of knowledge management. GE operates a people-based knowledge management system (Corporate Executive Council) which consists of council of management staff that meet for two days on a regular basis to share information and experience. Through this knowledge sharing process, information on the business success factors are made known to GE's management. Amazon has also successfully implemented a web-based knowledge management system. Amazon uses a single web interface to meet the needs of all its customers. This makes finding and sorting information on products easier. Also, information on previous purchases are used to predict customers' taste of products. This promotes repeat purchase and gives them some level of competitive advantage in the e-commerce industry. Pratt & Whitney is one of the most successful aerospace manufacturing companies. Their success has largely been attributed to the implementation of knowledge management. The company was able to save a lot of cost by using knowledge management systems to retain the vast experience and skills of some of its finest engineers who were already approaching retirement.

Although, many organizations have begun to adopt knowledge management, the review of existing literature shows that knowledge management is still evolving. The extent to which organizations adopt knowledge

management varies from one organization to another, though levels of adoption are higher in knowledge-based and skill-based organizations (such as Consultancy firms, IT solution providers etc.). The potential impact that knowledge management can have on organizational performance and employee job satisfaction has been confirmed by existing empirical studies. However, recent studies have identified some mediating factors like intellectual capital, innovation and knowledge application (Iqbal et al., 2019; Ode and Ayavoo, 2020). Recent studies suggest that for knowledge management to be effective in the contemporary business environment, it ought to be accompanied by effective knowledge management implementation strategies so as to avoid knowledge proliferation and structuration (Raudeliūnienė et al., 2018; Venkitachalam and Willmott, 2017). In recent times, organizations have also begun to apply the knowledge management model at the strategic level by way of codification and personalization (Venkitachalam and Willmott, 2017). However, most recent organizations are gradually evolving from codification (document-based knowledge management systems) towards personalization (people-based knowledge management systems). This may be due to the fact that some authors have identified organic knowledge management systems to have higher capacity to improve the configuration and alignment of knowledge management strategies (Chen and Fong, 2015). Modern businesses also try to foster the effectiveness of their organic (people-based) knowledge management process through gamification as this has been proven to improve the level of flexibility, motivation, collaboration and identification of relevant skill set among knowledge workers (Shpakova et al., 2017).

CHALLENGES OF ADOPTING KNOWLEDGE MANAGEMENT

Although, the usefulness of knowledge management as a tool for organizational efficiency and effectiveness are glaring, organizations face challenges in the process of adopting knowledge management. Some of the challenges include organizational culture, lack of knowledge management incentive, poor information management structures, change management issues and cultural differences.

Organizational culture plays a significant role in facilitating information sharing. In an open culture, the flow of information is more fluid. Implicit knowledge can easily be shared among colleagues and other member of staff. However, in practice, it is observed that some organizational cultures do not encourage this free flow of information, adopting more formal structures of communication that do not support knowledge management.

Another challenge to the use of knowledge management is the poor incentives that accrues to employees who deploy the use of tacit knowledge (such as intuition, gut feeling etc.) in the discharge of their duties, especially when it significantly improves organizational performance. As expected, organizations already have laid out processes and methodologies that they adopt in providing goods and services, yet appropriate recognition should be given to members of the company that deploy tacit knowledge to achieve goals.

Also, lack of proper structure that will link the structured and unstructured information is a challenge. In most cases, tacit information that will benefit the organizations are not shared in formal meetings for fear that the process will be viewed as unacceptable, though the individual achieves result through it. Organizations need to develop applications and technologies that will facilitate the capturing of unstructured information or tacit knowledge within the organization.

Another major challenge in implementing any novel structure or procedure is the ability to manage change. Once existing methods and processes have been regarded as generally acceptable, many may be reluctant to challenge status-quo. People often resist change because, more often than not, it will require the learning of new skills, a sacrifice that many are unwilling to make. Change agents are often disliked and criticized by others (at least at the initial stage). To avoid these negative reactions, many are unwilling to share tacit knowledge that the organization could benefit from.

The increasing impact of globalization in recent times has brought about multiple culture clashes in organizations. Organizations are made up of people from various backgrounds, with varying cultural beliefs. Some of these cultural inclinations impede information sharing at the socialization stage of knowledge management such as Informal face-to-face interactions with certain kinds of people may be discouraged in certain cultures (Basili et al., 1994). As a result, knowledge management is limited by cultural barriers to informal means of information diffusion.

LIMITATIONS OF THE KNOWLEDGE MANAGEMENT APPROACH

The benefit of knowledge management has led to considerable improvement in many organizations; however, the concept has its own limitations. Researches over the years, along with practical observations in organizations have shown that excessively vast pool of knowledge exists. As a result, it becomes difficult for organizations to filter only relevant knowledge management practices (Dingsøyr and Conradi, 2002). Hence, knowledge management is limited to the extent to which managers are willing to explore relevant practices and tools. Limited knowledge practices in certain areas of decision making can limit the application of knowledge management in such areas. Knowledge management thrives on database available in organizations. Since it

deals with the extent to which each company has been able to capture, store and disseminate knowledge that has been converted from tacit to explicit forms, it implies that Knowledge management is limited to the level of information available on that particular field (Walsham, 2001). Wiig (1997) posited that organization can easily capture, store and disseminate knowledge once it has been rendered explicit. On the other hand, the complexities involved in capturing tacit knowledge is a major problem that has made the application of knowledge management difficult in certain industries, especially industries where success is highly dependent on chance (such as gambling, insurance etc.). More recent authors have also suggested that knowledge capturing and sharing will only bring about substantial innovation if such stored knowledge are truly applied that is knowledge application plays a key role in the ability of knowledge management to lead to firm innovation (Ode and Ayavoo, 2020).

SUMMARY AND CONCLUSION

The quest for a better way of enhancing firm performance has necessitated the use of knowledge management among practitioners and this has gained the attention of scholars in recent times. Many organizations in the past have tried to improve performance by manipulating resources like money and machinery and often downplayed the importance of their intangible assets. The knowledge-based view theory, a spin-off from the resource-based view theory proposes knowledge as the most significant resource that organizations have at their disposal to influence performance. Thus, most organization now make concerted efforts at mining and storing knowledge. Knowledge management comprises a range of management practices to create, identify, store, diffuse, replicate and apply knowledge within organizations. These processes include socialization, capturing, dissemination and internalization. Knowledge management elements involve people, process and technology on knowledge sharing. There three major branches of knowledge management according to the components of the organization's factors that they address (ecological, organizational and techno-centric knowledge management). Knowledge management systems are one of the major contributions of information technology to knowledge management. A knowledge management system is an information system that stores and retrieves knowledge to improve understanding, collaboration, and process alignment within an organization. Many companies are currently putting together methods that convert tacit and implicit knowledge into explicit knowledge, in forms that can be coded, stored and transmitted, in a way that can be used by others in similar scenarios. Industry leaders like Ford otor Company, General Electric, Amazon and Pratt & Whitney has benefited substantially from implementing effective knowledge management systems.

Existing literature shows that knowledge management is still evolving. Also, factors like intellectual capital, innovation and knowledge application play a significant mediating role in the relationship between knowledge management implementation and organizational performance. Knowledge management cycle is incomplete if it is not accompanied by effective knowledge management implementation strategies. When knowledge management processes do not place emphasis on implementation of the acquired knowledge, it could lead to knowledge proliferation and structuration. Modern businesses have also been found to be gradually evolving from document-based knowledge management systems (mechanical) towards people-based knowledge management systems (organic) as a result of higher capacity of the latter for improvement and alignment of knowledge management strategies within a progressively dynamic business environment. Modern businesses also try to foster this improvement and the overall effectiveness of their organic knowledge management process through gamification. Gamification helps improve learning environment by increasing the level of flexibility and collaboration. It also helps in identifying and fostering relevant skill set among knowledge workers.

Although, the usefulness of knowledge management as a tool for organizational efficiency and effectiveness are glaring, there are some challenges in its implementation. Factors like organizational culture, lack of knowledge sharing incentive, cultural differences, lack of proper information structures and change management issues. Also, the complexities involved in converting tacit knowledge to explicit form are a major limitation of the knowledge management process.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interest.

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